



Development and climate change: A mainstreaming approach for assessing economic, social, and environmental impacts of adaptation measures

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Abstract:

The paper introduces the so-called climate change mainstreaming approach, where vulnerability and adaptation measures are assessed in the context of general development policy objectives. The approach is based on the application of a limited set of indicators. These indicators are selected as representatives of focal development policy objectives, and a stepwise approach for addressing climate change impacts, development linkages, and the economic, social and environmental dimensions related to vulnerability and adaptation are introduced. Within this context it is illustrated using three case studies how development policy indicators in practice can be used to assess climate change impacts and adaptation measures based on three case studies, namely a road project in flood prone areas of Mozambique, rainwater harvesting in the agricultural sector in Tanzania and malaria protection in Tanzania. The conclusions of the paper confirm that climate risks can be reduced at relatively low costs, but the uncertainty is still remaining about some of the wider development impacts of implementing climate change adaptation measures.

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Resource Description

Climate Scenario :

specification of climate scenario (set of assumptions about future states related to climate)

Special Report on Emissions Scenarios (SRES)

Special Report on Emissions Scenarios (SRES) Scenario: SRES A1, SRES A2, SRES B1, SRES B2

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Extreme Weather Event, Food/Water Security, Food/Water Security, Human Conflict/Displacement, Precipitation, Temperature

Extreme Weather Event: Flooding

Food/Water Security: Agricultural Productivity, Food Access/Distribution

Temperature: Fluctuations

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Geographic Feature:

resource focuses on specific type of geography

Rural

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Africa

Health Impact:

specification of health effect or disease related to climate change exposure

Developmental Effect, Infectious Disease, Morbidity/Mortality, Respiratory Effect

Developmental Effect: Reproductive, Other Functional Deficit

Infectious Disease: Foodborne/Waterborne Disease, Vectorborne Disease

Foodborne/Waterborne Disease: Other Diarrheal Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology:

type of model used or methodology development is a focus of resource

Cost/Economic, Exposure Change Prediction

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children, Low Socioeconomic Status, Pregnant Women

Other Vulnerable Population: People with low access to education

Resource Type:

format or standard characteristic of resource

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Policy/Opinion, Research Article

Timescale:

time period studied

Long-Term (>50 years)

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content